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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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			EXAMINER GILLESPIE, BENJAMIN	
			ART UNIT 1711	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/509,218

Applicant(s)

HILLE ET AL.

Examiner

Benjamin J. Gillespie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language "with at least polyisocyanate" in claim 1 appears to have omit the word "one" before "polyisocyanate", correction is required. Additionally, claim 1 recites the limitation "free NCO groups of the prepolymer", however there is insufficient antecedent basis for this limitation in the claim. "Trimrllitic anhydride" of claim 12 appears to be misspelled, correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-13, & 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Lamers et al Patent Application Publication US 2002/0114955 A1. The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not

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claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

3. Patentee discloses an aqueous coating composition and a method for production comprising the reaction product of polyisocyanate, compounds having at least one primary or secondary amino group with one hydroxyl group, and one anhydride, which is reactive toward hydroxyl groups of other reactants (Paragraphs 23-25, and 27-28). In particular, the polyisocyanate disclosed exhibit two free NCO groups, no OH groups, and form a prepolymer with either polyether polyol or polyester polyol, wherein the NCO groups can be further modified by alkoxypoly(oxyalkylene) alcohol (Paragraphs 66-68, 91, and 121). Lamers et al further teaches that the compounds having one primary or secondary amino group with one hydroxyl group consist of diethanolamine and/or diisopropanolamine, therefore having 2 to 6 carbons in the main chain, containing at least one secondary OH group, and reactive with NCO compounds via nitrogen atom, forming a urea bond (Paragraph 95). Lamers et al further discloses that anhydride present consists of trimellitic anhydride, and that the resultant polyurethane has a molecular overlapping the weight range claimed of 500 to 10,000, more specifically 1,000 to 4,000 (Paragraphs 97-98, and 108).

4. Regarding claims 13, & 16-17, patentee teaches that aqueous polyurethane coating can be cured i.e. cross-linked by melamine resin, wherein the cure temperature range from 71°C to 177°C (Paragraphs 115, 127, 158). The specified range overlaps claim 16 of less than 145°C but not 177°C, however Lamers et al teaches that if needed, higher temperatures can be used as necessary to active cross-linking mechanisms. Therefore examiner takes the position that cross-

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linking temperatures may exceed 180°C. Furthermore, Lamers et al teach that the cure temperature can react as high as 204°C for electrodepositable coatings (Paragraph 165).

5. Claims 1-13, & 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Lamers et al Patent Application Publication US 2002/0086115 A1. The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

6. Patentee discloses an aqueous coating composition and a method for production comprising the reaction product of polyisocyanate, compounds having at least one primary or secondary amino group with one hydroxyl group, and one anhydride, which is reactive toward hydroxyl groups of other reactants (Abstract; paragraphs 31). In particular, the polyisocyanate disclosed exhibit two free NCO groups, no OH groups, and form a prepolymer with either polyether polyol or polyester polyol, wherein the NCO groups can be further modified by alkoxypoly(oxyalkylene) alcohol (Paragraphs 32-35, 37, 60, and 90). Lamers et al further teaches that the compounds having one primary or secondary amino group with one hydroxyl group consist of diethanolamine and/or diisopropanolamine, therefore having 2 to 6 carbons in the main chain, containing at least one secondary OH group, and reactive with NCO compounds via nitrogen atom, forming a urea bond (Paragraph 64). Lamers et al further discloses that anhydride present consists of trimellitic anhydride, and that the resultant polyurethane has a

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molecular overlapping the weight range claimed of 500 to 10,000, more specifically 1,000 to 4,000 (Paragraphs 66-67, and 77).

7. Regarding claims 13, & 16-17, patentee teaches that aqueous polyurethane coating can be cured i.e. cross-linked by melamine resin, wherein the cure temperature range from 71°C to 177°C (Paragraphs 84, 96, and 128). The specified range overlaps claim 16 of less than 145°C but not 177°C, however Lamers et al teaches that if needed, higher temperatures can be used as necessary to active cross-linking mechanisms. Therefore examiner takes the position that cross-linking temperatures may exceed 180°C. Furthermore, Lamers et al teach that the cure temperature can react as high as 204°C for electrodepositable coatings (Paragraph 135).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 14, 15, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamers et al Patent Application Publication US 2002/0114955 A1 in view of Vandervoorde et al ('256). As discussed before, Lamers et al teaches a cross-linked polyurethane aqueous coating. While Lamers et al discloses that the aqueous coating is cross-linked by a melamine resin, there is no teaching as to what particular melamine resin is used, specifically hexamethoxymethyl melamine.

9. Vandervoorde et al teaches a cross-linked polyurethane aqueous coating, and goes on to teach the cross-linking agent is hexamethoxymethyl melamine, which is highly alkylated and is

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without NH groups (Column 11 lines 64-67, column 12 lines 1, 3-6). Therefore it would have been obvious to one skilled in the art at the time of the invention to combine in Lamers et al individually old ingredients from Vandervoorde et al for their known additive function, i.e. it is obvious to add a known ingredient for its known function; in re Linder 173 USPQ 356; in re DIAL et al 140 USPQ 244.

10. Claims 14, 15, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamers et al Patent Application Publication US 2002/0086115 A1 in view of Vandervoorde et al ('256). As discussed before, Lamers et al teaches a cross-linked polyurethane aqueous coating. While Lamers et al discloses that the aqueous coating is cross-linked by a melamine resin, there is no teaching as to what particular melamine resin is used, specifically hexamethoxymethyl melamine.

11. Vandervoorde et al teaches a cross-linked polyurethane aqueous coating, and goes on to teach the cross-linking agent is hexamethoxymethyl melamine, which is highly alkylated and is without NH groups (Column 11 lines 64-67, column 12 lines 1, 3-6). Therefore it would have been obvious to one skilled in the art at the time of the invention to combine in Lamers et al individually old ingredients from Vandervoorde et al for their known additive function, i.e. it is obvious to add a known ingredient for its known function; in re Linder 173 USPQ 356; in re DIAL et al 140 USPQ 244.

Response to Amendments/Arguments

12. Applicant's amendments, filed 3/12/2007, with respect to the rejection of claims 1-20 under 35 U.S.C. 112 2nd paragraph have been fully considered and are persuasive, the rejection has been withdrawn. The amendments filed 3/12/2007 with respect to the rejection of claims 1-

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3, 5-9, 11-12, and 18-19 as being anticipated by Seitz et al ('985) under 35 U.S.C. 102(b) have been fully considered and are persuasive. The rejection of claims 1-3, 5-9, 11-12, and 18-19 as being anticipated by Seitz et al has been withdrawn.

13. Applicant's arguments filed 3/12/2007 with respect to the combination of Lamers et al and Vandevoorde et al have been fully considered but they are not persuasive. Applicants argue that Vandevoorde et al is not relevant art because patentees fail to teach a polyurethane backbone. Although Vandevoorde et al may not teach the exact same composition as Lamers et al, column 4 lines 33-34 clearly teach that the polymer backbone of the invention may consist of polyurethanes, which are the reaction product of polyester polyol and polyisocyanate (Col 10 lines 16-18). Furthermore the determination that a reference is from a nonanalogous art is decided if the reference is within the field of the inventors' endeavor, which in this case both Lamers et al and Vandevoorde et al are directed towards water-thinable polyurethanes.

Response to Declaration

14. Applicant's declaration filed 3/12/2007 has been fully considered but is not persuasive. Paragraphs 3 and 4 have been reviewed and based on paragraph three stating that Paul Lamers was one of seven inventors named in Lamers et al (2002/0114955), and paragraph 4 stating that the current application is the work of three inventors including Paul Lamers, has failed to establish Paul Lamers as the sole inventor of the relied upon subject matter. As a result the declaration fails to establish that this was not an invention by "another".

15. Please note that while the rejection under 35 U.S.C. 102(e) is maintained, Lamers et al 2002/0114955 is also applicable under 35 U.S.C. 102(a).

Conclusion


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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin J. Gillespie whose telephone number is 571-272-2472.

The examiner can normally be reached on 8am-5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

B. Gillespie


RABON SERGENT
PRIMARY EXAMINER